

Please add the following claims:

117. In a geographical region with significant air pollution caused in substantial part by the emission of exhaust gases from the operation of automobiles within said region, the method of aiding in the reduction of air pollution caused by such automobiles comprising the steps of:

(1) producing an unleaded gasoline selected from the group consisting of:

(a) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 87, a 50% D-86 distillation point no greater than 210 °F, and a paraffin content greater than 72 volume percent;

(b) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 92, a 50% D-86 distillation point no greater than 210 °F, and a paraffin content greater than 65 volume percent;

(c) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 87, a 50% D-86 distillation point less than 193 °F, and an olefin content less than 10 volume percent;

(d) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 87, a 50% D-86 distillation point no greater than 210 °F, and an olefin content less than 1 volume percent; and

(e) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 87, a 50% D-86 distillation point no greater than 210 °F, an olefin content less than 10 volume percent, and one or more added oxygenates, said oxygenates being present but in an amount yielding a total oxygen concentration no greater than the equivalent provided by 17.2 volume percent methyl tertiary butyl ether;

(2) delivering said unleaded gasoline to a substantial number of gasoline service stations distributed within the region; and

(3) dispensing the unleaded gasoline from said gasoline service stations into a substantial number of automobiles having catalytic converters.

118. The method of claim 117 performed during a time period of one month wherein the amount of said unleaded gasoline dispensed in step (3) during said month is the equivalent of at least 100,000 gallons of gasoline per day.

119. The method of claim 117 performed during a time period of one week wherein the amount of said unleaded gasoline dispensed in step (3) during said week is at least 10,000,000 gallons of gasoline.

120. The method of claim 117 wherein the amount of said unleaded gasoline dispensed in step (3) over the course of one month is equivalent to at least 25% of the amount dispensed by all service stations in said region for said month.

121. The method of claim 117, 118, 119, or 120 wherein said gasoline produced in step (1) is gasoline (a).

122. The method of claim 121 wherein the gasoline produced in step (1) has an olefin content less than 10 volume percent and a 90% D-86 distillation point no greater than 315 °F.

123. The method of claim 122 wherein the gasoline produced in step (1) has an olefin content less than 6 volume percent.

124. The method of claim 122 wherein the gasoline produced in step (1) has a 50% D-86 distillation point less than 200 °F.

125. The method of claim 117, 118, 119, or 120 wherein said gasoline produced in step (1) is gasoline (b).

126. The method of claim 125 wherein the gasoline produced in step (1) has an olefin content less than 6 volume percent and a 90% D-86 distillation point no greater than 315 °F.

127. The method of claim 126 wherein the gasoline produced in step (1) has a 50% D-86 distillation point less than 200 °F.

128. The method of claim 117, 118, 119, or 120 wherein said gasoline produced in step (1) is gasoline (c).

129. The method of claim 128 wherein the gasoline produced in step (1) has an olefin content less than 6 volume percent and a 90% D-86 distillation point no greater than 315 °F.

130. The method of claim 129 wherein the gasoline produced in step (1) has a paraffin content greater than 65 volume percent.

131. The method of claim 117, 118, 119, or 120 wherein said gasoline produced in step (1) is gasoline (d).

132. The method of claim 131 wherein said gasoline (d) has a paraffin content greater than 65 volume percent and a 90% D-86 distillation point less than 300 °F.

133. The method of claim 117, 118, 119, or 120 wherein said gasoline produced in step (1) is gasoline (e).

134. The method of claim 133 wherein said unleaded gasoline produced in step (1) contains one or more oxygenates in a total oxygen concentration between the equivalent of 10.1 and 17.2 vol.% methyl tertiary butyl ether.

135. The method of claim 133 wherein the gasoline produced in step (1) has a paraffin content greater than 65 volume percent.

136. The method of claim 133 wherein said unleaded gasoline produced in step (1) contains less than 8 volume percent olefins and contains one or more oxygenates in a total oxygen concentration between the equivalent of 10.1 and 14.9 vol. % methyl tertiary butyl ether.

137. The method of claim 136 wherein said unleaded gasoline produced in step (1) contains less than 6 volume percent olefins.

138. The method of claim 136 wherein said unleaded gasoline produced in step (1) contains less than 1 volume percent olefins.

139. The method of claim 133 wherein the 90% D-86 distillation point of said unleaded gasoline produced in step (1) is no greater than 315 °F.

140. The method of claim 139 wherein said unleaded gasoline produced in step (1) contains less than 8 volume percent olefins and contains one or more oxygenates in a total oxygen concentration between the equivalent of 10.1 and 14.9 vol. % methyl tertiary butyl ether.

141. The method of claim 140 wherein said gasoline produced in step (1) contains greater than 65 volume percent paraffins.

142. A method for reducing the amount of at least one gaseous pollutant selected from the group consisting of NOx, CO, and hydrocarbons emitted in automotive exhaust emissions, comprising:

(1) introducing, into a spark-induced automotive internal combustion engine in an automotive vehicle equipped with a catalytic converter for treating exhaust emissions, an unleaded gasoline selected from the group consisting of:

(a) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 87, a 50% D-86 distillation point no greater than 210 °F, and a paraffin content greater than 72 volume percent;

(b) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 92, a 50% D-86 distillation point no greater than 210 °F, and a paraffin content greater than 65 volume percent;

(c) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 87, a 50% D-86 distillation point less than 193 °F, and an olefin content less than 10 volume percent;

(d) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 87, a 50% D-86 distillation point no greater than 210 °F, and an olefin content less than 1 volume percent; and

(e) unleaded gasolines having a Reid Vapor Pressure less than 7.0 psi, an octane value of at least 87, a 50% D-86 distillation point no greater than 210 °F, an olefin content less than 10 volume percent, and one or more added oxygenates, said oxygenates being present but in an amount yielding a total oxygen concentration no greater than the equivalent provided by 17.2 volume percent methyl tertiary butyl ether;

(2) combusting the gasoline in said engine, and

(3) passing emissions from said engine through the catalytic converter to be treated therein.

143. The method of claim 142 wherein the gasoline introduced into said engine is unleaded gasoline (a).

144. The method of claim 142 wherein the gasoline introduced into said engine is unleaded gasoline (b).

145. The method of claim 142 wherein the gasoline introduced into said engine is unleaded gasoline (c).

146. The method of claim 142 wherein the gasoline introduced into said engine is unleaded gasoline (d).

147. The method of claim 142 wherein the gasoline introduced into said engine is unleaded gasoline (e).

148. The method of claim 147 wherein said unleaded gasoline contains greater than 65 volume percent paraffins.

149. The method of claim 143, 144, 145, 147 or 148 wherein said unleaded gasoline contains less than 6 volume percent olefins and the 90% D-86 distillation point is no greater than 315°F.

150. The method of claim 149 wherein said unleaded gasoline contains one or more oxygenates in a total oxygen concentration between the equivalent of 10.1 and 14.9 vol.% methyl tertiary butyl ether.